CLAIMS:

1. A method for the screening of ligands which bind a cerebral cortical voltage-dependent calcium channel $\alpha_2\delta$-1 subunit, said method comprising the steps of:

- contacting a secreted soluble recombinant calcium channel $\alpha_2\delta$-1 subunit polypeptide with:
  - a ligand of interest; and
  - a labelled compound which binds the $\alpha_2\delta$-1 subunit; and
  - measuring the level of binding of the labelled compound to the $\alpha_2\delta$-1 subunit.

2. A method for the screening of biologically active products, in particular products that modulate a nervous system function in a subject, comprising the steps of:

- contacting a secreted soluble recombinant calcium channel $\alpha_2\delta$-1 subunit polypeptide with:
  - a candidate product; and
  - a labelled compound which binds a $\alpha_2\delta$-1 subunit; and
  - -measuring the level of binding of the labelled compound to the secreted soluble $\alpha_2\delta$-1 subunit.

3. A method according to claims 1 or 2, wherein said method is an SPA assay.

4. A method according to claim 1 or 2, wherein said method is a flashplate assay.

5 A method according to claims 1 or 2 and 4 where the flashplate assay is a wheat germ lectin flashplate format.

6. A method according to claim 1or 2, wherein said method is a filter binding assay.

7. A method according to claim 1 or 2, wherein said secreted soluble recombinant calcium channel $\alpha_2\delta$-1 subunit polypeptide is selected from polypeptides having at least 80%, amino-acid identity with the polypeptide comprising from amino acid 1 to between

amino-acids 1008 and 1087, preferably between amino-acids 1018 and 1078, and most preferably between amino-acids 1043 and 1078 of SEQ ID N°33 or SEQ ID N°44.

8. A method according to claim 1 or 2, wherein said secreted soluble recombinant calcium channel $\alpha_2\delta$-1 subunit polypeptide is selected from the group consisting of SEQ ID N°34, 35, 36, 37, 41, 42 and 43 with the polypeptides of SEQ ID N°37 and SEQ ID N°43 being most preferred.

9 A method according to claims 1 or 2 , wherein the $\alpha 2\delta$-1 subunit polypeptide has at least 80% amino acid sequence identity of any of SEQ ID N°34, 35, 36, 37, 41, 42 and 43.

10. Use of C-myc, FLAG, a sequence of histidine residues, heamaglutin A, V5, Xpress or GST tagg for the purification and screening of $\alpha_2\delta$-1.

11. Use of C-myc, FLAG, a sequence of histidine residues, heamaglutin A, V5, Xpress or GST tagg for the purification and screening of $\alpha_2\delta$-1 of SEQ ID N°30, 31, 32, 33, 34, 35, 36, 37 and 38.

12. Use of a sequence of histidine residues tagg for the purification and screening of $\alpha_2\delta$-1 of SEQ ID N°30, 31, 32, 33, 34, 35, 36, 37 and 38.

13. Use of a sequence of 6 histidine residues tagg for the purification and screening of $\alpha_2\delta$-1 of SEQ ID N°30, 31, 32, 33, 34, 35, 36, 37 and 38.

14. Use of C-terminal a 6 histidine residues tagg of $\alpha_2\delta$-1 of SEQ ID N°30, 31, 32, 33, 34, 35, 36, 37 and 38 for purification and screening.

15. Use of nucleic acids encoding C-myc, FLAG, a sequence of histidine residues, heamaglutin A, V5, Xpress or GST taggs for the purification and screening of expressed $\alpha_2\delta$-1.

16. Use of nucleic acids encoding C-myc, FLAG, a sequence of histidine residues, heamaglutin A, V5, Xpress or GST tagg for the purification and screening of expressed $\alpha_2\delta$-1 of SEQ ID N°30, 31, 32, 33, 34, 35, 36, 37 and 38.

17. Use of nucleic acids encoding a sequence of histidine residues tagg for the purification and screening of an expressed $\alpha_2\delta$-1 of SEQ ID N°30, 31, 32, 33, 34, 35, 36, 37 and 38.

18. Use of a nucleic acid sequence encoding a sequence of 6 histidine residue tagg for the purification and screening of an expressed $\alpha_2\delta$-1 of SEQ ID N°30, 31, 32, 33, 34, 35, 36, 37 and 38.

19. Use of the C-terminal part of a nucleic acid sequence encoding 6 histidine residue tagg of expressed $\alpha_2\delta$-1 of SEQ ID N°30, 31, 32, 33, 34, 35, 36, 37 and 38 for purification and screening.

20. Use of labelled compounds which have an affinity of less than 500nm for the gabapentin binding site of $\alpha 2\delta$-1 for the screening of ligands that bind to $\alpha 2\delta$-1.

21. Use according to claim 20, wherein the labelled compound is selected from labelled Gabapentin, L-Norleucine, L-Allo-Isoleucine, L-Methionine, L-Leucine, L-Isoleucine, L-Valine or L-Phenylalanine.

22. A method of screening of claims 1 or 2, wherein, the assay is conducted between 1 and 30°C.

23. A kit for the screening of ligands which bind a cerebral cortical voltage-dependent calcium channel $\alpha_2\delta$-1 subunit, said kit comprising:

- a secreted soluble recombinant calcium channel $\alpha_2\delta$-1 subunit; and
- a labelled compound which binds to the $\alpha_2\delta$-1 subunit.

24. A kit of claim 23, wherein the labelled compound is chosen from any one of the labelled compounds of claims 20 or 21.

25. A method for the screening of ligands which bind a cerebral cortical voltage-dependent calcium channel $\alpha_2\delta$ subunit, said method comprising the steps of:

- contacting a secreted soluble recombinant calcium channel $\alpha_2\delta$ subunit polypeptide with:
  - a ligand of interest; and
  - a labelled compound which binds the $\alpha_2\delta$ subunit; and
  - measuring the level of binding of the labelled compound to the $\alpha_2\delta$ subunit.

26. A method for the screening of biologically active products, in particular products that modulate a nervous system function in a subject, comprising the steps of:

- contacting a secreted soluble recombinant calcium channel $\alpha_2\delta$ subunit polypeptide with:
  - a candidate product; and
  - a labelled compound which binds a $\alpha_2\delta$ subunit; and
  - -measuring the level of binding of the labelled compound to the secreted soluble $\alpha_2\delta$ subunit.

27. A method according to claims 25 or 26, wherein said method is an SPA assay.

28. A method according to claim 25 or 26, wherein said method is a flashplate assay.

29. A kit for the screening of ligands which bind a cerebral cortical voltage-dependent calcium channel $\alpha_2\delta$ subunit, said kit comprising:

- a secreted soluble recombinant calcium channel $\alpha_2\delta$ subunit; and
- a labelled compound which binds to the $\alpha_2\delta$ subunit.

30. A kit of claim 29, wherein the labelled compound is chosen from any one of the labelled compounds of claims 20 or 21.